INDEX TO AUTHORS

A

Abood, Leo G. See *Kun and Abood*, 813

Abrahams, Marjorie D. See *Vickery and Abrahams*, 37

Allison, James B., Chow, Bacon F., White, John I., and **Roth, Jay S.** The effect of enzymatic hydrolysis on the nutritive value of casein. III. Intravenous feeding in dogs, 383

Altschule, M. D., and **Lewis, H. D.** Measurement of carbonic anhydrase activity of blood at body temperature, 557

Amiard, Gaston. See *Velluz, Amiard, and Bartos*, 1137

Anderson, Carl T. See *Michaels, Anderson, Margen, and Kinsell*, 175

Anderson, Pearl. See *Freeman, Anderson, Oberg, and Dorfman*, 655

Anfinsen, Christian B. See *Buchanan and Anfinsen*, 47

Angier, R. B. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow*, 857

Armstrong, Marvin D., and **Binkley, Francis.** A metabolic study of α-aminobutyric acid, 1059

Artom, Camillo, Cornatzer, W. E., and **Crowder, Marietta.** The action of an analogue of ethanolamine (diethanolamine) on the formation of liver phospholipides, 495

Austin, F. L. See *Paul, Austin, Paul, and Ells*, 345

Axelrod, A. E., and **Hofmann, Klaus.** Oxybiotin derivatives as biotin and oxybiotin antagonists, 525

B

Baer, Erich, and **Fischer, Hermann O. L.** A new synthesis of phosphorylenolpyruvic acid, 145

Ball, Eric G., and **Cooper, Octavia.** The activity of succinate oxidase in relation to phosphate and phosphorus compounds, 113

—. See *Christensen, Plimpton, and Ball*, 791

Balls, A. K. See *Schwimmer and Balls*, 883

Banerjee, Sachchidananda, and **Ghosh, Naresh Chandra.** Studies on the effect of thyroid and methylthiouracil on the glucose tolerance test in normal and scorbutic guinea pigs, 189

Baranowski, Tadeusz. Crystalline glycerophosphate dehydrogenase from rabbit muscle. 535

— and **Niederland, T. Rudolf.** Aldolase activity of myogen A, 543

Barker, H. A. See *Stadtman and Barker*, 1085, 1095, 1117, 1169

—. See *Wolochow, Putman, Doudoroff, Hassid, and Barker*, 1237

Bartlett, Paul D., Gaebler, Oliver H., and **Harmon, Anne.** Studies on the mechanism of nitrogen storage. I. Effects of anterior pituitary growth hormone preparations on plasma glutamine, total free amino acids, and the excretion of urinary ammonia, 1021

Bartos, Jaroslav. See *Velluz, Amiard, and Bartos*, 1137

Bessey, Otto A., Lowry, Oliver H., and **Love, Ruth H.** The fluorometric measurement of the nucleotides of riboflavin and their concentration in tissues, 755

—. See *Lowry, Bessey, and Crawford*, 389, 399

Beuk, J. F., Chornock, F. W., and **Rice, E. E.** The effect of heat on the availability of pork protein *in vivo* and *in vitro*, 1243

Billman, John H., Parker, Earl E., and **Smith, Walter T.** Amino acids. VI. The oxidation of salts of β-amino alcohols, 29

Binkley, Francis, and **Watson, Jean.** Formation of creatine *in vitro* from methyl phosphate and guanidoacetic acid, 971
—. See *Armstrong and Binkley,* 1059
Blum, Amos E. See *Horn, Jones, and Blum,* 695
Boggiano, E. M. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857
Boissonas, R. A., Turner, Robert A., and **du Vigneaud, Vincent.** Metabolic study of the methyl groups of butter yellow, 1053
Bonner, James. See *Wildman, Campbell, and Bonner,* 273
—. See *Wildman, Cheo, and Bonner,* 985
Boothe, J. H. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857
Borenfreund, Ellen. See *Dische and Borenfreund,* 1297
Bourdillon, Jaques. Crystalline protein from commercial beans (*Phaseolus vulgaris*), 553
Broquist, Harry P., and **Snell, Esmond E.** Studies of the mechanism of histidine synthesis in lactic acid bacteria, 59
Brown, Douglas M. See *Smith, Brown, and Hanson,* 33
Brown, George Bosworth. See *Di Carlo, Schultz, Roll, and Brown,* 329
—. See *Roll, Brown, Di Carlo, and Schultz,* 333
Brown, Kenneth D. See *Kubacki, Brown, and Laskowski,* 73
Bryan, Carl E. See *Mitchell, Hutchison, Skipper, and Bryan,* 675
—. See *Skipper, White, and Bryan,* 1187
Bubl, Edward C., and **Butts, Joseph S.** The utilization of some phenylpyruvic acids for growth in the rat, 839
Buchanan, John M., and **Anfinsen, Christian B.** Partial purification of aconitase, 47
Buchanan, John M., Hastings, A. Baird, and **Nesbett, Frances B.** The effect of the ionic environment on the synthesis of glycogen from glucose in rat liver slices, 435
—, —, and —. The effect of the ionic environment on the synthesis of glycogen and total carbohydrate from pyruvate in liver slices, 447
Butts, Joseph S. See *Bubl and Butts,* 839

C

Campaigne, E. See *Garst, Campaigne, and Day,* 1013
Campbell, Jean M. See *Wildman, Campbell, and Bonner,* 273
Carroll, William R., Stacy, Gardner W., and **du Vigneaud, Vincent.** α-Ketobutyric acid as a product in the enzymatic cleavage of cystathionine, 375
Caswell, Muriel C., Koditschek, Leah K., and **Hendlin, David.** The microbiological estimation of *Lactobacillus lactis* Dorner with vitamin B_{12} as a standard, 125
Cavallini, Doriano. See *Reed, Cavallini, Plum, Rachele, and du Vigneaud,* 783
Chaikoff, I. L. See *Ranney, Entenman, and Chaikoff,* 307
Chance, Britton. The primary and secondary compounds of catalase and methyl or ethyl hydrogen peroxide. III. Reactions in concentrated alkyl hydrogen peroxide solutions, 865
—. IV. Reactions with hydrogen peroxide, 947
Chandler, Joseph P. See *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud,* 99
Charalampous, Frixos C., and **Hegsted, D. Mark.** Acetylation in the diabetic rat, 623
Chargaff, Erwin. See *Nyman and Chargaff,* 741
—. See *Zamenhof and Chargaff,* 727
Cheo, C. C. See *Wildman, Cheo, and Bonner,* 985

Chornock, F. W. See *Beuk, Chornock, and Rice,* 1243
Chow, Bacon F. See *Allison, Chow, White, and Roth,* 383
Christensen, William R., Plimpton, Calvin H., and **Ball, Eric G.** The hexokinase of the rat erythrocyte and the influence of hormonal and other factors on its activity, 791
Cohen, Philip P. See *MacLeod, Grisolia, Cohen, and Lardy,* 1003
Cohen, Stanley, and **Lewis, Howard B.** The nitrogenous metabolism of the earthworm (*Lumbricus terrestris*), 79
Cohn, Mildred. Mechanisms of cleavage of glucose-1-phosphate, 771
—. See *Sutherland, Cohn, Posternak, and Cori,* 1285
Comar, C. L., Singer, Leon, and **Davis, George K.** Molybdenum metabolism and interrelationships with copper and phosphorus, 913
Cook, Elton S. See *Kreke, Kroger, and Cook,* 565
Coon, Minor J., and **Gurin, Samuel.** Studies on the conversion of radioactive leucine to acetoacetate, 1159
Cooper, Octavia. See *Ball and Cooper,* 113
Cori, Carl F. See *Sutherland, Cohn, Posternak, and Cori,* 1285
—. See *Sutherland, Cori, Haynes, and Olsen,* 825
Cornatzer, W. E. See *Artom, Cornatzer, and Crowder,* 495
Costello, M. See *Moore, Roberts, Costello, and Schonberger,* 1147
Crawford, Elizabeth J. See *Lowry, Bessey, and Crawford,* 389
Cross, Nancy. See *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud,* 99
Crowder, Marietta. See *Artom, Cornatzer, and Crowder,* 495

D

Davis, George K. See *Comar, Singer, and Davis,* 913
Day, Harry G. See *Frohman and Day,* 93
Day, Harry G. See *Garst, Campaigne, and Day,* 1013
Dekker, Charles A., Taylor, Sterling P., Jr., and Fruton, Joseph S. Synthesis of peptides of methionine and their cleavage by proteolytic enzymes, 155
Deutsch, H. F., and **McShan, W. H.** Biophysical studies of blood plasma proteins. XII. Electrophoretic studies of the blood serum proteins of some lower animals, 219
Di Carlo, Frederick J., Schultz, Alfred S., Roll, Paul M., and **Brown, George Bosworth.** Isotopically labeled nucleic acid from yeast, 329
—. See *Roll, Brown, Di Carlo, and Schultz,* 333
Dische, Zacharias, and **Borenfreund, Ellen.** A specific color reaction of glycolic aldehyde, 1297
Dju, Mei Yu. See *Quaife and Dju,* 263
Dorfman, Albert. See *Freeman, Anderson, Oberg, and Dorfman,* 655
Doudoroff, M. See *Wolochow, Putman, Doudoroff, Hassid, and Barker,* 1237

E

Ells, V. R. See *Paul, Austin, Paul, and Ells,* 345
Elvehjem, C. A. See *Hankes, Henderson, and Elvehjem,* 1027
—. See *Williams, Nichol, and Elvehjem,* 689
Engel, Frank L. See *Schwartz and Engel,* 1047
Entenman, C. See *Ranney, Entenman, and Chaikoff,* 307

F

Feinstein, Robert N. Perborate as substrate in a new assay of catalase, 1197
Field, John. See *Pierce and Field,* 895
Fischer, Hermann O. L. See *Baer and Fischer,* 145
Fodor, Paul J., Price, Vincent E., and **Greenstein, Jesse P.** Enzymatic hydrolysis of saturated and unsaturated tripeptides, 193

Franklin, A. L. See *Stokstad, Jukes, Pierce, Page, and Franklin*, 647
Frayser, R. See *Hickam and Frayser*, 457
Freeman, Monroe E., Anderson, Pearl, Oberg, Marian, and **Dorfman, Albert.** Preparation of purified hyaluronidase from bovine testis, 655
Frohman, Charles E., and **Day, Harry G.** Effect of oxythiamine on blood pyruvate-lactate relationships and the excretion of thiamine in rats, 93
Fruton, Joseph S. See *Dekker, Taylor, and Fruton*, 155
—. See *Simmonds and Fruton*, 635

G

Gaebler, Oliver H. See *Bartlett, Gaebler, and Harmon*, 1021
Garst, Roger G., Campaigne, E., and **Day, Harry G.** 3-Substituted thiophenes. IV. Synthesis of β-3-thienylalanine and its antagonism to phenylalanine in the rat, 1013
Gazzola, A. L. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow*, 857
Geschwind, I., and **Li, Choh Hao.** The nucleic acid content of fetal rat liver, 467
Geyer, R. P., Matthews, L. W., and **Stare, F. J.** Metabolism of emulsified trilaurin (—$C^{14}O$O—) and octanoic acid (—$C^{14}O$O—) by rat tissue slices, 1037
Ghosh, Naresh Chandra. See *Banerjee and Ghosh*, 189
Gilbert, James B., Price, Vincent E., and **Greenstein, Jesse P.** Effect of anions on the non-enzymatic desamidation of glutamine, 209
—, —, and —. Resolution of racemic phenylalanine, tyrosine, and tryptophan, 473
Goldstein, Norman P. See *Yamamoto, Goldstein, and Treadwell*, 615
Goldsworthy, Patrick D., Winnick, Theodore, and **Greenberg, David M.** Distribution of C^{14} in glycine and serine of liver protein following the administration of labeled glycine, 341
Gordon, George B. See *Lifson, Gordon, Visscher, and Nier*, 803
Gordon, Malcolm, and **Mitchell, Herschel K.** A fluorometric method for the estimation of tryptophan, 1065
—. See *Mitchell, Gordon, and Haskins*, 1071
Greenberg, David M. See *Goldsworthy, Winnick, and Greenberg*, 341
—. See *Siekevitz and Greenberg*, 845
Greenstein, Jesse P. See *Fodor, Price, and Greenstein*, 193
—. See *Gilbert, Price, and Greenstein*, 209, 473
Greenwood, D. A. See *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Grier, Robert S., Hood, Margaret B., and **Hoagland, Mahlon B.** Observations on the effects of beryllium on alkaline phosphatase, 289
Grisolia, Santiago. See *MacLeod, Grisolia, Cohen, and Lardy*, 1003
Gurin, Samuel. See *Coon and Gurin*, 1159
—. See *Schepartz and Gurin*, 663
Guthneck, Barbara Tait. See *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077

H

Hankes, L. V., Henderson, L. M., and **Elvehjem, C. A.** Effect of cystine and threonine on the growth of rats receiving tryptophan-deficient rations, 1027
Hanson, H. Theo. See *Smith, Brown, and Hanson*, 33
Harmon, Anne. See *Bartlett, Gaebler, and Harmon*, 1021
Harris, Philip L., and **Ludwig, Marion I.** Vitamin E potency of α-tocopherol and α-tocopherol esters, 611
Haskins, Francis A. See *Mitchell, Gordon, and Haskins*, 1071
Hassid, W. Z. See *Wolochow, Putman, Doudoroff, Hassid, and Barker*, 1237
Hastings, A. Baird. See *Buchanan, Hastings, and Nesbett*, 435, 447

Haynes, Robert. See *Sutherland, Cori, Haynes, and Olsen,* 825
Hegsted, D. Mark. See *Charalampous and Hegsted,* 623
Hendee, Edelmira D. See *Pappenheimer and Hendee,* 597
Henderson, L. M. See *Hankes, Henderson, and Elvehjem,* 1027
Hendlin, David. See *Caswell, Koditschek, and Hendlin,* 125
Hestrin, Shlomo. Acylation reactions mediated by purified acetylcholine esterase, 879
—. The reaction of acetylcholine and other carboxylic acid derivatives with hydroxylamine, and its analytical application, 249
—. See *Nachmansohn, Hestrin, and Voripaieff,* 875
Hickam, J. B., and **Frayser, R.** Spectrophotometric determination of blood oxygen, 457
Hill, Caroline J. See *Klemperer, Miller, and Hill,* 281
Hoagland, Mahlon B. See *Grier, Hood, and Hoagland,* 289
Hofmann, Klaus. See *Axelrod and Hofmann,* 525
Hood, Margaret B. See *Grier, Hood, and Hoagland,* 289
Horn, Millard J., Jones, D. Breese, and **Blum, Amos E.** Microbiological determination of isoleucine in proteins and foods, 695
Hughes, Dorothy. See *Christensen, Plimpton, and Ball,* 791
Hummel, J. P. The fluorometric determination of malic acid, 1225
— and **Lindberg, Olov.** Studies on the mechanism of aerobic phosphorylation, 1
Hutchings, B. L., Mowat, J. H., Oleson, J. J., Gazzola, A. L., Boggiano, E. M., Seeger, D. R., Boothe, J. H., Waller, C. W., Angier, R. B., Semb, J., and **SubbaRow, Y.** Synthesis and some biological properties of 4-aminopteroylaspartic acid, 857
Hutchison, Olivia S. See *Mitchell, Hutchison, Skipper, and Bryan,* 675

I

Ikawa, Miyoshi, and **Niemann, Carl.** A spectrophotometric study of the behavior of carbohydrates in seventy-nine per cent sulfuric acid, 923

J

Jacobs, Walter A., and **Sato, Yoshio.** The aconite alkaloids. XXII. The demethylation of delphinine derivatives, 133
— and —. XXIII. Oxidation of isopyrooxodelphonine, dihydroisopyrooxodelphonine, and their desmethylanhydro derivatives, 479
Jones, D. Breese. See *Horn, Jones, and Blum,* 695
Jones, M. J. See *Lampen, Jones, and Roepke,* 423
Jukes, Thomas H. See *Stokstad, Jukes, Pierce, Page, and Franklin,* 647

K

Kaufman, Seymour, and **Neurath, Hans.** The effect of methanol on the hydrolysis of acetyl-L-tyrosinamide by chymotrypsin, 181
—. See *Schwert and Kaufman,* 517
Keller, Elizabeth B. See *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud,* 99
Kerr, Stanley E., and **Seraidarian, Krikor.** Studies on ribonucleic acid. I. Preparation from pancreas, 1203
Kidwai, A. R. See *Reed, Kidwai, and du Vigneaud,* 571
Kingsley, George R., and **Schaffert, Roscoe R.** Determination of free and total cholesterol by direct chloroform extraction, 315
Kinsell, Laurance W. See *Michaels, Anderson, Margen, and Kinsell,* 175
Kisil, T. See *Altschule and Lewis,* 557
Klemperer, Friedrich W., Miller, Joseph M., and **Hill, Caroline J.** The inhibition of alkaline phosphatase by beryllium, 281
Koditschek, Leah K. See *Caswell, Koditschek, and Hendlin,* 125

Kraybill, H. R. See *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Kreke, Cornelius W., Kroger, Sister M. Honora, and **Cook, Elton S.** Comparison of response of succinic dehydrogenase and succinoxidase systems to organic mercurial and thiol compounds, 565
Kroger, Sister M. Honora. See *Kreke, Kroger, and Cook*, 565
Kubacki, Virginia, Brown, Kenneth D., and **Laskowski, M.** Electrophoresis and solubility of chymotrypsinogen B and chymotrypsin B, 73
Kun, Ernest, and **Abood, Leo G.** Biochemical properties of succinoxidase from *Salmonella aertrycke*, 813
Kurtz, Alton C. Use of copper (II) ion in masking α-amino groups of amino acids, 1253

L

Lampen, J. O., Jones, M. J., and **Roepke, R. R.** Mutant strains of *Escherichia coli* unable to synthesize *p*-aminobenzoic acid, 423
Lardy, Henry A. See *MacLeod, Grisolia, Cohen, and Lardy*, 1003
—. See *Plaut and Lardy*, 13
Laskowski, M. See *Kubacki, Brown, and Laskowski*, 73
LePage, G. A., and Mueller, Gerald C. Preparation of triphosphopyridine nucleotide, 975
—. See *Stoesz and LePage*, 587
Lewis, H. D. See *Altschule and Lewis*, 557
Lewis, Howard B. See *Cohen and Lewis*, 79
Li, Choh Hao. See *Geschwind and Li*, 467
Lifson, Nathan, Gordon, George B., Visscher, M. B., and **Nier, A. O.** The fate of utilized molecular oxygen and the source of the oxygen of respiratory carbon dioxide, studied with the aid of heavy oxygen, 803
Lindberg, Olov. See *Hummel and Lindberg*, 1
Little, J. Maxwell. A modified diphenylamine procedure for the determination of inulin, 747
Livermore, Arthur H., and **du Vigneaud, Vincent.** Preparation of high potency oxytocic material by the use of countercurrent distribution, 365
Love, Ruth H. See *Bessey, Lowry, and Love*, 755
Lowry, Oliver H., Bessey, Otto A., and **Crawford, Elizabeth J.** Photolytic and enzymatic transformations of pteroylglutamic acid, 389
—, —, and —. Pterine oxidase, 389
—. See *Bessey, Lowry, and Love*, 755
—. See *Quaife, Scrimshaw, and Lowry*, 1229
Ludwig, Marion I. See *Harris and Ludwig*, 611

M

Mackenzie, Cosmo G., Chandler, Joseph P., Keller, Elizabeth B., Rachele, Julian R., Cross, Nancy, and **du Vigneaud, Vincent.** The oxidation and distribution of the methyl group administered as methionine, 99
MacLeod, Patricia R., Grisolia, Santiago, Cohen, Philip P., and **Lardy, Henry A.** Metabolic functions of biotin. III. The synthesis of citrulline from ornithine in liver tissue from normal and biotin-deficient rats, 1003
Margen, Sheldon. See *Michaels, Anderson, Margen, and Kinsell*, 175
Mason, Howard S., and **Wright, Charles I.** The chemistry of melanin. V. Oxidation of dihydroxyphenylalanine by tyrosinase, 235
Matthews, L. W. See *Geyer, Matthews, and Stare*, 1037
McShan, W. H. See *Deutsch and McShan*, 219
Melville, Donald B., Pierce, John G., and **Partridge, C. W. H.** The preparation of C^{14}-labeled biotin and a study

of its stability during carbon dioxide fixation, 299

Meyerhof, Otto. Further studies of the Harden-Young effect in alcoholic fermentation of yeast preparations, 575

Michaels, George D., Anderson, Carl T., Margen, Sheldon, and **Kinsell, Laurance W.** A method for the colorimetric determination of calcium and magnesium in small amounts of urine, stool, and food, 175

Miller, J. A. See *Mueller and Miller*, 1125

Miller, Joseph M. See *Klemperer, Miller, and Hill*, 281

Mitchell, Herschel K., Gordon, Malcolm, and **Haskins, Francis A.** Separation of enzymes on the filter paper chromatopile, 1071

—. See *Gordon and Mitchell*, 1065

Mitchell, Jack H., Jr., Hutchison, Olivia S., Skipper, Howard E., and **Bryan, Carl E.** Carbamates in the chemotherapy of leucemia. VII. The rate of catabolism of urethane in normal and neoplastic mice, 675

Moore, Dan H., Roberts, J. B., Costello, M., and **Schonberger, T. W.** Factors influencing the electrophoretic analysis of human serum, 1147

Mosettig, Erich. See *Tabor and Mosettig*, 703

Moubasher, Radwan, and **Sina, Aly.** The gasometric determination of α-amino acids by *peri*-naphthindan-2,3,4-trione hydrate-carbon dioxide method in pure solutions, with remarks upon its use in blood and urine, 681

Mowat, J. H. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and Subba Row*, 857

Mueller, Gerald C., and **Miller, J. A.** The reductive cleavage of 4-dimethylaminoazobenzene by rat liver: the intracellular distribution of the enzyme system and its requirement for triphosphopyridine nucleotide, 1125

—. See *LePage and Mueller*, 975

N

Nachmansohn, David, Hestrin, Shlomo, and **Voripaieff, Helen.** Enzymatic synthesis of a compound with acetylcholine-like biological activity, 875

Nesbett, Frances B. See *Buchanan, Hastings, and Nesbett*, 435, 447

Neurath, Hans. See *Kaufman and Neurath*, 181

Nichol, C. A. See *Williams, Nichol, and Elvehjem*, 689

Niederland, T. Rudolf. See *Baranowski and Niederland*, 543

Niemann, Carl. See *Ikawa and Niemann*, 923

Nier, A. O. See *Lifson, Gordon, Visscher, and Nier*, 803

Nyman, Melvin A., and **Chargaff, Erwin.** On the lipoprotein particles of yeast cells, 741

O

Oberg, Marian. See *Freeman, Anderson, Oberg, and Dorfman*, 655

Oleson, J. J. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and Subba Row*, 857

Olsen, Norman S. See *Sutherland, Cori, Haynes, and Olsen*, 825

P

Page, A. C., Jr. See *Stokstad, Jukes, Pierce, Page, and Franklin*, 647

Pappenheimer, Alwin M., Jr., and **Hendee, Edelmira D.** Diphtheria toxin. V. A comparison between the diphtherial succinoxidase system and that of beef heart muscle, 597

Parker, Earl E. See *Billman, Parker, and Smith*, 29

Partridge, C. W. H. See *Melville, Pierce, and Partridge*, 299

Paul, H. E., Austin, F. L., Paul M. F., and **Ells, V. R.** Metabolism of the nitrofurans. I. Ultraviolet absorption studies of urinary end-products after oral administration, 345

Paul, M. F. See *Paul, Austin, Paul, and Ells*, 345

Pierce, F. T., and **Field, John.** The effect of 2,4-dinitrophenol on hexokinase and glycogenolysis, 895
Pierce, J. See *Stokstad, Jukes, Pierce, Page, and Franklin,* 647
Pierce, John G. See *Melville, Pierce, and Partridge,* 299
Plaut, G. W. E., and **Lardy, Henry A.** The oxalacetate decarboxylase of *Azotobacter vinelandii,* 13
Plimpton, Calvin H. See *Christensen, Plimpton, and Ball,* 791
Plum, Fred. See *Reed, Cavallini, Plum, Rachele, and du Vigneaud,* 783
Polglase, W. J. See *Smith and Polglase,* 1209
Posternak, Theodore. Synthesis of α- and β-glucose-1,6-diphosphate, 1269
—. See *Sutherland, Cohn, Posternak, and Cori,* 1285
Prado, J. Leal. See *Saffran and Prado,* 1301
Price, Vincent E. See *Fodor, Price, and Greenstein,* 193
—. See *Gilbert, Price, and Greenstein,* 209, 473
Putman, E. W. See *Wolochow, Putman, Doudoroff, Hassid, and Barker,* 1237

Q

Quaife, Mary Louise, and **Dju, Mei Yu.** Chemical estimation of vitamin E in tissue and the tocopherol content of some normal human tissues, 263
—, **Scrimshaw, Nevin S.,** and **Lowry, Oliver H.** A micromethod for assay of total tocopherols in blood serum, 1229

R

Rachele, Julian R. See *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud,* 99
—. See *Reed, Cavallini, Plum, Rachele, and du Vigneaud,* 783
Ranney, R. E., Entenman, C., and **Chaikoff, I. L.** The lecithin, cephalin, and sphingomyelin contents of plasma and liver of the fowl; their metabolic interrelations as shown by the administration of diethylstilbestrol, 307
Rapport, Maurice M. Serum vasoconstrictor (serotonin). V. The presence of creatinine in the complex. A proposed structure of the vasoconstrictor principle, 961
Reed, Lester J., Cavallini, Doriano, Plum, Fred, Rachele, Julian R., and **du Vigneaud, Vincent.** The conversion of methionine to cystine in a human cystinuric, 783
—, **Kidwai, A. R.,** and **du Vigneaud, Vincent.** Preparation of the optically active isomers of *S*-benzylhomocysteine by enzymatic resolution, 571
Rice, E. E. See *Beuk, Chornock, and Rice,* 1243
Rittenberg, D. See *Sprinson and Rittenberg,* 707, 715
Roberts, J. B. See *Moore, Roberts, Costello, and Schonberger,* 1147
Roberts, Sidney, and **White, Abraham.** Studies on the origin of the serum proteins, 505
Roepke, R. R. See *Lampen, Jones, and Roepke,* 423
Roll, Paul M., Brown, George Bosworth, Di Carlo, Frederick J., and **Schultz, Alfred S.** The metabolism of yeast nucleic acid in the rat, 333
—. See *Di Carlo, Schultz, Roll, and Brown,* 329
Rossiter, R. J., and **Wong, Esther.** Esterase of rabbit polymorphonuclear leucocytes, 933
Rostorfer, H. H. Comparison of methods for measurement of avian hemoglobin, 901
Roth, Jay S. See *Allison, Chow, White, and Roth,* 383

S

Saffran, Murray, and **Prado, J. Leal.** Inhibition of aconitase by *trans*-aconitate, 1301
Sato, Yoshio. See *Jacobs and Sato,* 133, 479
Schaffert, Roscoe R. See *Kingsley and Schaffert,* 315

Schepartz, Bernard, and **Gurin, Samuel.** The intermediary metabolism of phenylalanine labeled with radioactive carbon, 663

Schonberger, T. W. See *Moore, Roberts, Costello, and Schonberger,* 1147

Schultz, Alfred S. See *Di Carlo, Schultz, Roll, and Brown,* 329

—. See *Roll, Brown, Di Carlo, and Schultz,* 333

Schwartz, Theodore B., and **Engel, Frank L.** The adrenal cortex and serum peptidase activity, 1047

Schweigert, B. S., Guthneck, Barbara Tait, Kraybill, H. R., and **Greenwood, D. A.** The amino acid composition of pork and lamb cuts, 1077

Schwert, George W., and **Kaufman, Seymour.** The substrate specificity and sedimentation behavior of δ-chymotrypsin, 517

Schwimmer, Sigmund, and **Balls, A. K.** Starches and their derivatives as adsorbents for malt α-amylase, 883

Scrimshaw, Nevin S. See *Quaife, Scrimshaw, and Lowry,* 1229

Seeger, D. R. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857

Semb, J. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857

Seraidarian, Krikor. See *Kerr and Seraidarian,* 1203

Shack, Joseph. Purification and properties of dehydropeptidases, 411

Siekevitz, Philip, and **Greenberg, David M.** The biological formation of serine from glycine, 845

Simmonds, Sofia, and **Fruton, Joseph S.** The utilization of amino acids and peptides by mutant strains of *Escherichia coli,* 635

Sina, Aly. See *Moubasher and Sina,* 681

Singer, Leon. See *Comar, Singer, and Davis,* 913

Skipper, Howard E., White, Locke, Jr., and **Bryan, Carl E.** Studies on the hazard involved in use of C^{14}. I. Retention of carbon from labeled sodium bicarbonate, 1187

—. See *Mitchell, Hutchison, Skipper, and Bryan,* 675

Smith, Emil L., Brown, Douglas M., and **Hanson, H. Theo.** The sedimentation behavior and molecular weight of pancreatic carboxypeptidase, 33

— and **Polglase, W. J.** The specificity of leucine aminopeptidase. II. Optical and side chain specificity, 1209

Smith, Walter T. See *Billman, Parker, and Smith,* 29

Snell, Esmond E. See *Broquist and Snell,* 59

Sowden, John C. The condensation of C^{14}-nitromethane with D-arabinose: preparation of 1-C^{14}-D-glucose and 1-C^{14}-D-mannose, 55

Sprinson, David B., and **Rittenberg, D.** The rate of utilization of ammonia for protein synthesis, 707

— and —. The rate of interaction of the amino acids of the diet with the tissue proteins, 715

Stacy, Gardner W. See *Carroll, Stacy, and du Vigneaud,* 375

Stadtman, E. R., and **Barker, H. A.** Fatty acid synthesis by enzyme preparations of *Clostridium kluyveri.* I. Preparation of cell-free extracts that catalyze the conversion of ethanol and acetate to butyrate and caproate, 1085

— and —. II. The aerobic oxidation of ethanol and butyrate with the formation of acetyl phosphate, 1095

— and —. III. The activation of molecular hydrogen and the conversion of acetyl phosphate and acetate to butyrate, 1117

— and —. IV. The phosphoroclastic decomposition of acetoacetate to acetyl phosphate and acetate, 1169

Stare, F. J. See *Geyer, Matthews, and Stare,* 1037

Stoesz, Paul A., and **LePage, G. A.** Glycolysis in liver homogenates, 587

Stokstad, E. L. R., Jukes, Thomas H., Pierce, J., Page A. C., Jr., and **Franklin, A. L.** The multiple nature of the animal protein factor, 647

SubbaRow, Y. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857

Sutherland, Earl W. Activation of phosphoglucomutase by metal-binding agents, 1279

—, **Cohn, Mildred, Posternak, Theodore,** and **Cori, Carl F.** The mechanism of the phosphoglucomutase reaction, 1285

—, **Cori, Carl F., Haynes, Robert,** and **Olsen, Norman S.** Purification of the hyperglycemic-glycogenolytic factor from insulin and from gastric mucosa, 825

T

Tabor, Herbert, and **Mosettig, Erich.** Isolation of acetylhistamine from urine following oral administration of histamine, 703

Taylor, Sterling P., Jr. See *Dekker, Taylor, and Fruton,* 155

Treadwell, C. R. See *Yamamoto, Goldstein, and Treadwell,* 615

Turner, Robert A. See *Boissonnas, Turner, and du Vigneaud,* 1053

V

Velluz, Leon, Amiard, Gaston, and **Bartos, Jaroslav.** Thiamine triphosphoric acid. Its relation to the thiamine pyrophosphate (cocarboxylase) of Lohmann and Schuster, 1137

Vickery, Hubert Bradford, and **Abrahams, Marjorie D.** The metabolism of the organic acids of tobacco leaves. II. Effect of culture of excised leaves in solutions of *d*-isocitrate and acetate, 37

du Vigneaud, Vincent. See *Boissonnas, Turner, and du Vigneaud,* 1053

—. See *Carroll, Stacy, and du Vigneaud,* 375

—. See *Livermore and du Vigneaud,* 365

du Vigneaud, Vincent. See *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud,* 99

—. See *Reed, Cavallini, Plum, Rachele, and du Vigneaud,* 783

—. See *Reed, Kidwai, and du Vigneaud,* 571

Visscher, M. B. See *Lifson, Gordon, Visscher, and Nier,* 803

Voripaieff, Helen. See *Nachmansohn, Hestrin, and Voripaieff,* 875

W

Waller, C. W. See *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and SubbaRow,* 857

Watson, Jean. See *Binkley and Watson,* 971

White, Abraham. See *Roberts and White,* 505

White, John I. See *Allison, Chow, White, and Roth,* 383

White, Locke, Jr. See *Skipper, White, and Bryan,* 1187

Wildman, Sam G., Campbell, Jean M., and **Bonner, James.** Tissue-bound, acid-labile phosphorus in tobacco leaves, oat coleoptiles, and rat liver, 273

—, **Cheo, C. C.,** and **Bonner, James.** The proteins of green leaves. III. Evidence of the formation of tobacco mosaic virus protein at the expense of a main protein component in tobacco leaf cytoplasm, 985

Williams, J. N., Jr., Nichol, C. A., and **Elvehjem, C. A.** Relation of dietary folic acid and vitamin B_{12} to enzyme activity in the chick, 689

Wilson, Jean R. See *Meyerhof,* 575

Winnick, Theodore. See *Goldsworthy, Winnick, and Greenberg,* 341

Wolochow, H., Putman, E. W., Doudoroff, M., Hassid, W. Z., and **Barker, H. A.** Preparation of sucrose labeled with C^{14} in the glucose or fructose component, 1237

Wong, Esther. See *Rossiter and Wong,* 933

Wright, Charles I. See *Mason and Wright*, 235

Y

Yamamoto, Richard S., Goldstein, Norman P., and **Treadwell, C. R.** Cholesterol esterases. I. Preparation of substrate mixture and characterization of the hydrolytic cholesterol esterase of pancreatin, 615

Z

Zamenhof, Stephen, and **Chargaff, Erwin.** Studies on the desoxypentose nuclease of yeast and its specific cellular regulation, 727

INDEX TO SUBJECTS

A

Acetate: Butyrate and caproate conversion from, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1085

Tobacco leaf culture, effect, *Vickery and Abrahams*, 37

Acetic acid: Guanido-, creatine formation, *in vitro*, effect, *Binkley and Watson*, 971

Acetoacetate: Acetyl phosphate and acetate formation from, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1169

Leucine, radioactive, conversion from, *Coon and Gurin*, 1159

Acetyl acetate: Acetoacetate decomposition to, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1169

Butyrate conversion from, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1117

Acetylation: Diabetes, *Charalampous and Hegsted*, 623

Acetylcholine: Esterase, acylation reactions, *Hestrin*, 879

Hydroxylamine with, reaction, analytical application, *Hestrin*, 249

-Like compound, enzymatic synthesis, *Nachmansohn, Hestrin, and Voripaieff*, 875

Acetylhistamine: Urine, histamine administration effect, *Tabor and Mosettig*, 703

Acetyl phosphate: Acetoacetate decomposition to, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1169

Butyrate conversion from, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1117

Ethanol and butyrate oxidation, *Clostridium kluyveri* enzyme preparations, formation, *Stadtman and Barker*, 1095

Acetyl-L-tyrosinamide: Chymotrypsin, hydrolysis, methanol effect, *Kaufman and Neurath*, 181

Aconitase: *trans*-Aconitate effect, *Saffran and Prado*, 1301

Purification, *Buchanan and Anfinsen*, 47

Aconite: Alkaloids, *Jacobs and Sato*, 133, 479

Adrenal(s): Cortex, blood serum peptidase, effect, *Schwartz and Engel*, 1047

Alanine: Dihydroxyphenyl-, oxidation, tyrosinase effect, *Mason and Wright*, 235

Phenyl-. *See* Phenylalanine

β-3-Thienyl-, phenylalanine relation, *Garst, Campaigne, and Day*, 1013

—, synthesis, *Garst, Campaigne, and Day*, 1013

Alcohol(s): β-Amino, salts, oxidation, *Billman, Parker, and Smith*, 29

Yeast, fermentation, Harden-Young effect, *Meyerhof*, 575

Aldolase: Myogen A, *Baranowski and Niederland*, 543

Alkaloid(s): Aconite, *Jacobs and Sato*, 133, 479

Amine: Diphenyl-, inulin determination, use, *Little*, 747

Hydroxyl-, acetylcholine and carboxylic acid derivatives, reaction with, analytical application, *Hestrin*, 249

Amino acid(s): *Billman, Parker, and Smith*, 29

α-, blood, determination, *peri*-naphthindan-2,3,4-trione hydrate-carbon dioxide use, *Moubasher and Sina*, 681

—, determination, *peri*-naphthindan-2,3,4-trione hydrate-carbon dioxide use, *Moubasher and Sina*, 681

—, urine, determination, *peri*-naphthindan-2,3,4-trione hydrate-carbon dioxide use, *Moubasher and Sina*, 681

Amino acid(s)—*continued*:
α-Amino groups, cupric ion, effect, *Kurtz*, 1253
Blood plasma, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon*, 1021
Diet, tissue protein, interaction, *Sprinson and Rittenberg*, 715
Escherichia coli mutant strains, utilization, *Simmonds and Fruton*, 635
Lamb, *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Pork, *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Amino alcohol(s): β-, salts, oxidation, *Billman, Parker, and Smith*, 29
Aminobenzoic acid: *p*-, synthesis, *Escherichia coli* mutant strains, effect, *Lampen, Jones, and Roepke*, 423
Aminobutyric acid: α-, metabolism, *Armstrong and Binkley*, 1059
Aminopeptidase: Leucine, specificity, *Smith and Polglase*, 1209
Aminopteroylaspartic acid: 4-, synthesis and properties, *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and Subba Row*, 857
Ammonia: Protein synthesis, utilization rate, *Sprinson and Rittenberg*, 707
Urine, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon*, 1021
Amylase: α-, malt, starches and derivatives, adsorbents, *Schwimmer and Balls*, 883
Anhydrase: Carbonic, blood, determination, *Altschule and Lewis*, 557
Anion(s): Glutamine desamidation, nonenzymatic, effect, *Gilbert, Price, and Greenstein*, 209
Arabinose: D-, C^{14}-nitromethane condensation with, *Sowden*, 55
Aspartic acid: 4-Aminopteroyl-, synthesis and properties, *Hutchings, Mowat, Oleson, Gazzola, Boggiano, Seeger, Boothe, Waller, Angier, Semb, and Subba Row*, 857
Azotobacter vinelandii: Oxalacetate decarboxylase, *Plaut and Lardy*, 13

B

Bacillus: *See also Lactobacillus*
Bacteria: Lactic acid, histidine synthesis, mechanism, *Broquist and Snell*, 59
See also Azotobacter, Escherichia, Salmonella
Bean(s): Protein, crystalline, *Bourdillon*, 553
Benzene: 4-Dimethylaminoazo-, cleavage, reductive, liver, triphosphopyridine nucleotide, relation, *Mueller and Miller*, 1125
Benzoic acid: *p*-Amino-. *See p*-Aminobenzoic acid,
Benzylhomocysteine: *S*-, isomers, preparation, enzymatic, *Reed, Kidwai, and du Vigneaud*, 571
Beryllium: Phosphatase, alkaline, effect, *Klemperer, Miller, and Hill*, 281
Grier, Hood, and Hoagland, 289
Biotin: C^{14}-labeled, carbon dioxide fixation, stability, *Melville, Pierce, and Partridge*, 299
—, preparation, *Melville, Pierce, and Partridge*, 299
Liver citrulline synthesis from ornithine, effect, *MacLeod, Grisolia, Cohen, and Lardy*, 1003
Metabolic functions, *MacLeod, Grisolia, Cohen, and Lardy*, 1003
Oxy-. *See* Oxybiotin
Oxybiotin derivatives, effect, *Axelrod and Hofmann*, 525
Blood: α-Amino acids, determination, *peri*-naphthindan-2,3,4-trione hydrate-carbon dioxide use, *Moubasher and Sina*, 681
Carbonic anhydrase, determination, *Altschule and Lewis*, 557
Oxygen, determination, spectrophotometric, *Hickam and Frayser*, 457
Pyruvate-lactate, oxythiamine effect, *Frohman and Day*, 93
Blood cell(s): Red, hexokinase, hormones, effect, *Christensen, Plimpton, and Ball*, 791
White, polymorphonuclear, esterase, *Rossiter and Wong*, 993

Blood plasma: Amino acids, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon,* 1021
Cephalin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff,* 307
Glutamine, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon,* 1021
Lecithin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff,* 307
Proteins, biophysics, *Deutsch and McShan,* 219
Sphingomyelin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff,* 307
Blood serum: Electrophoresis, factors influencing, *Moore, Roberts, Costello, and Schonberger,* 1147
Peptidase, adrenal cortex effect, *Schwartz and Engel,* 1047
Proteins, electrophoresis, *Deutsch and McShan,* 219
—, origin, *Roberts and White,* 505
Serotonin, *Rapport,* 961
Tocopherols, determination, micro-, *Quaife, Scrimshaw, and Lowry,* 1229
Vasoconstrictor, *Rapport,* 961
—, chemical constitution, *Rapport,* 961
—, creatinine, *Rapport,* 961
Blood sugar: *See also* Hyperglycemia
Butter yellow: Methyl groups, metabolism, *Boissonnas, Turner, and du Vigneaud,* 1053
Butyrate: Acetyl phosphate and acetate conversion to, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker,* 1117
Ethanol and acetate conversion to, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker,* 1085
Oxidation, *Clostridium kluyveri* enzyme preparations, acetyl phosphate formation, *Stadtman and Barker,* 1095
Butyric acid: α-Amino-, metabolism, *Armstrong and Binkley,* 1059
α-Keto-, cystathionine cleavage, enzymatic, *Carroll, Stacy, and du Vigneaud,* 375

C

Calcium: Food, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell,* 175
Stool, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell,* 175
Urine, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell,* 175
Caproate: Ethanol and acetate conversion to, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker,* 1085
Carbamate(s): Leucemia, chemotherapy, *Mitchell, Hutchinson, Skipper, and Bryan,* 675
Carbohydrate(s): Sulfuric acid solutions, spectrophotometry, *Ikawa and Niemann,* 923
Total, liver, synthesis from pyruvate, ion effect, *Buchanan, Hastings, and Nesbett,* 447
Carbon: Radioactive, phenylalanine metabolism, use in study, *Schepartz and Gurin,* 663
Carbon^{14}: *Skipper, White, and Bryan,* 1187
Sodium bicarbonate, labeled, retention, *Skipper, White, and Bryan,* 1187
Sucrose labeled with, preparation from glucose or fructose, *Wolochow, Putman, Doudoroff, Hassid, and Barker,* 1237
Carbon dioxide: Fixation, C^{14}-labeled biotin, stability, *Melville, Pierce, and Partridge,* 299
peri-Naphthindan-2,3,4-trione hydrate and, α-amino acid determination, use, *Moubasher and Sina,* 681
Respiratory, oxygen source, heavy oxygen in study, *Lifson, Gordon, Visscher, and Nier,* 803
Carbonic anhydrase: Blood, determination, *Altschule and Lewis,* 557
Carboxylase: Co-. *See* Cocarboxylase
De-, oxalacetate, *Azotobacter vinelandii, Plaut and Lardy,* 13

Carboxylic acid: Derivatives, hydroxylamine reaction with, analytical application, *Hestrin*, 249
Carboxypeptidase: Pancreas, sedimentation rate and molecular weight, *Smith, Brown, and Hanson*, 33
Casein: Enzyme hydrolysis, nutrition effect, *Allison, Chow, White, and Roth*, 383
Catalase: Determination, perborate use, *Feinstein*, 1197
-Ethyl hydrogen peroxide compounds, *Chance*, 865, 947
Hydrogen peroxide, alkyl, reaction, *Chance*, 865
— —, reaction, *Chance*, 947
-Methyl hydrogen peroxide compounds, *Chance*, 865, 947
Cephalin: Blood plasma, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Liver, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Chick: Enzyme activity, folic acid and vitamin B_{12}, relation, *Williams, Nichol, and Elvehjem*, 689
Cholesterol: Determination, chloroform extraction, *Kingsley and Schaffert*, 315
Esterase, *Yamamoto, Goldstein, and Treadwell*, 615
—, pancreatin, preparation and properties, *Yamamoto, Goldstein, and Treadwell*, 615
Choline: Acetyl-, esterase, acylation reactions, *Hestrin*, 879
—, hydroxylamine with, reaction, analytical application, *Hestrin*, 249
—, -like compound, enzymatic synthesis, *Nachmansohn, Hestrin, and Voripaieff*, 875
Chymotrypsin: Acetyl-L-tyrosinamide hydrolysis, methanol effect, *Kaufman and Neurath*, 181
B, electrophoresis and solubility, *Kubacki, Brown, and Laskowski*, 73
δ-, substrate specificity and sedimentation rate, *Schwert and Kaufman*, 517
Chymotrypsinogen: B, electrophoresis and solubility, *Kubacki, Brown, and Laskowski*, 73
Citrulline: Liver, synthesis from ornithine, biotin deficiency, effect, *MacLeod, Grisolia, Cohen, and Lardy*, 1003
Clostridium kluyveri: Enzyme preparations, acetyl phosphate and acetate conversion to butyrate, *Stadtman and Barker*, 1117
— —, — — and acetate from acetoacetate decomposition, *Stadtman and Barker*, 1169
— —, ethanol and acetate conversion to butyrate and caproate, *Stadtman and Barker*, 1085
— —, — — butyrate oxidation, acetyl phosphate formation, *Stadtman and Barker*, 1095
— —, fatty acid synthesis, *Stadtman and Barker*, 1085, 1095, 1117, 1169
— —, hydrogen activation, *Stadtman and Barker*, 1117
Cocarboxylase: Thiamine triphosphoric acid, relation, *Velluz, Amiard, and Bartos*, 1137
Copper: Ion, amino acids, α-amino groups, effect, *Kurtz*, 1253
Molybdenum metabolism, relation, *Comar, Singer, and Davis*, 913
Creatine: Formation *in vitro*, methyl phosphate and guanidoacetic acid effect, *Binkley and Watson*, 971
Creatinine: Blood serum vasoconstrictor, *Rapport*, 961
Cystathionine: Cleavage, enzymatic, α-ketobutyric acid production, *Carroll, Stacy, and du Vigneaud*, 375
Cysteine: *S*-Benzyl-, isomers, preparation, enzymatic, *Reed, Kidwai, and du Vigneaud*, 571
Cystine: Growth, tryptophan-deficient diets, effect, *Hankes, Henderson, and Elvehjem*, 1027
Methionine conversion to, cystinuria, *Reed, Cavallini, Plum, Rachele, and du Vigneaud*, 783
Cystinuria: Methionine conversion to cystine, *Reed, Cavallini, Plum, Rachele, and du Vigneaud*, 783

Cytoplasm: Tobacco leaf, tobacco mosaic virus protein, effect, *Wildman, Cheo, and Bonner,* 985

D

Decarboxylase: Oxalacetate, *Azotobacter vinelandii, Plaut and Lardy,* 13
Dehydrogenase: Glycerophosphate, crystalline, muscle, *Baranowski,* 535
Succinic, mercury and thiol compounds, effect, *Kreke, Kroger, and Cook,* 565
Dehydropeptidase: Purification and properties, *Shack,* 411
Delphinine: Derivatives, demethylation, *Jacobs and Sato,* 133
Delphonine: Dihydroisopyrooxo-, *Jacobs and Sato,* 479
Isopyrooxo-, and desmethylanhydro derivatives, oxidation, *Jacobs and Sato,* 479
Desoxypentose nuclease: Yeast, *Zamenhof and Chargaff,* 727
Diabetes: Acetylation, *Charalampous and Hegsted,* 623
Diethanolamine: Liver phospholipides, formation, effect, *Artom, Cornatzer, and Crowder,* 495
Diethylstilbestrol: Blood plasma and liver lecithin, cephalin, and sphingomyelin, effect, *Ranney, Entenman, and Chaikoff,* 307
Dihydroisopyrooxodelphonine: Desmethylanhydro derivatives, oxidation, *Jacobs and Sato,* 479
Oxidation, *Jacobs and Sato,* 479
Dihydroxyphenylalanine: Oxidation, tyrosinase effect, *Mason and Wright,* 235
Dimethylaminoazobenzene: 4-, cleavage, reductive, liver, triphosphopyridine nucleotide relation, *Mueller and Miller,* 1125
Dinitrophenol: 2,4-, hexokinase and glycogenolysis, effect, *Pierce and Field,* 895
Diphenylamine: Inulin determination, use, *Little,* 747
Diphtheria: Succinoxidase system, heart muscle and, comparison, *Pappenheimer and Hendee,* 597
Diphtheria—*continued:*
Toxin, *Pappenheimer and Hendee,* 597

E

Earthworm: Nitrogen metabolism, *Cohen and Lewis,* 79
Enolpyruvic acid: Phosphoryl-, synthesis, *Baer and Fischer,* 145
Enzyme(s): Acetylcholine-like compound, synthesis, *Nachmansohn, Hestrin, and Voripaieff,* 875
S-Benzylhomocysteine, isomers, preparation, *Reed, Kidwai, and du Vigneaud,* 571
Casein hydrolysis, nutritive effect, *Allison, Chow, White, and Roth,* 383
Chromatography, paper, *Mitchell, Gordon, and Haskins,* 1071
Clostridium kluyveri, acetyl phosphate and acetate conversion to butyrate, *Stadtman and Barker,* 1117
— —, — — and acetate from acetoacetate decomposition, *Stadtman and Barker,* 1169
— —, ethanol and acetate conversion to butyrate and caproate, *Stadtman and Barker,* 1085
— —, — — butyrate oxidation, acetyl phosphate formation, *Stadtman and Barker,* 1095
— —, fatty acid synthesis, *Stadtman and Barker,* 1085, 1095, 1117, 1169
— —, hydrogen activation, *Stadtman and Barker,* 1117
Cystathionine cleavage, α-ketobutyric acid production, *Carroll, Stacy, and du Vigneaud,* 375
Folic acid and vitamin B_{12}, effect, *Williams, Nichol, and Elvehjem,* 689
Proteolytic, methionine peptides, cleavage, *Dekker, Taylor, and Fruton,* 155
Pteroylglutamic acid transformation, *Lowry, Bessey, and Crawford,* 389
Tripeptides, hydrolysis, *Fodor, Price, and Greenstein,* 193
See also Aconitase, Aldolase, etc.
Erythrocyte(s): *See* Blood cell, red

Escherichia coli: Mutant strains, amino acids and peptides, utilization, *Simmonds and Fruton*, 635
— —, *p*-aminobenzoic acid synthesis, effect, *Lampen, Jones, and Roepke*, 423
Esterase: Acetylcholine, acylation reactions, *Hestrin*, 879
Blood cell, white, polymorphonuclear, *Rossiter and Wong*, 933
Cholesterol, *Yamamoto, Goldstein, and Treadwell*, 615
—, pancreatin, preparation and properties, *Yamamoto, Goldstein, and Treadwell*, 615
Ethanol: Butyrate and caproate, conversion from, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1085
Oxidation, *Clostridium kluyveri* enzyme preparations, acetyl phosphate formation, *Stadtman and Barker*, 1095
Ethanolamine: Analogue, liver phospholipides, effect, *Artom, Cornatzer, and Crowder*, 495
Di-, liver phospholipides, formation, effect, *Artom, Cornatzer, and Crowder*, 495

F

Fatty acid(s): Synthesis, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker*, 1085, 1095, 1117 1169
Fetus: Liver, nucleic acid, *Geschwind and Li*, 467
Folic acid: Enzyme activity, effect, *Williams, Nichol, and Elvehjem*, 689
See also Pteroylglutamic acid
Food: Calcium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Isoleucine determination, *Horn, Jones, and Blum*, 695
Magnesium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Fructose: Sucrose, C^{14} labeled from, *Wolochow, Putman, Doudoroff, Hassid, and Barker* 1237
Furan(s): Nitro-, metabolism, *Paul, Austin, Paul, and Ells*, 345
—, urine end-products, ultraviolet absorption, administration effect, *Paul, Austin, Paul, and Ells*, 345

G

Gastric: *See* Stomach
Glucose: 1-C^{14}-D-, preparation, *Sowden*, 55
Liver glycogen synthesis from, ion effect, *Buchanan, Hastings, and Nesbett*, 435
Sucrose, C^{14} labeled from, *Wolochow, Putman, Doudoroff, Hassid, and Barker*, 1237
Tolerance, scurvy, thyroid and methylthiouracil effect, *Banerjee and Ghosh*, 189
Glucose-1,6-diphosphate: α- and β-, synthesis, *Posternak*, 1269
Glucose-1-phosphate: Cleavage mechanism, *Cohn*, 771
Glutamic acid: Pteroyl-. *See* Pteroylglutamic acid
Glutamine: Blood plasma, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon*, 1021
Desamidation, non-enzymatic, anion effect, *Gilbert, Price, and Greenstein*, 209
Glycerophosphate: Dehydrogenase, crystalline, muscle, *Baranowski*, 535
Glycine: Labeled, liver protein glycine and serine, C^{14}-labeled, administration effect, *Goldsworthy, Winnick, and Greenberg*, 341
Liver protein, C^{14}-labeled, labeled glycine administration, effect, *Goldsworthy, Winnick, and Greenberg*, 341
Serine formation from, biological, *Siekevitz and Greenberg*, 845
Glycogen: Liver, synthesis from pyruvate, ion effect, *Buchanan, Hastings, and Nesbett*, 447
Synthesis, liver, from glucose, ion effect, *Buchanan, Hastings, and Nesbett*, 435
Glycogenolysis: 2,4-Dinitrophenol effect, *Pierce and Field* 895
Hyperglycemic-, factor, gastric mucosa,

Glycogenolysis—*continued:*
purification, *Sutherland, Cori, Haynes, and Olsen,* 825
Hyperglycemic-, factor, insulin, purification, *Sutherland, Cori, Haynes, and Olsen,* 825
Glycolic aldehyde: Color reaction, *Dische and Borenfreund,* 1297
Glycolysis: Liver homogenates, *Stoesz and LePage,* 587
Growth: Cystine, tryptophan-deficient diets, effect, *Hankes, Henderson, and Elvehjem,* 1027
Hormone, anterior pituitary, blood plasma glutamine, amino acids, and urinary ammonia, effect, *Bartlett, Gaebler, and Harmon,* 1021
Phenylpyruvic acid effect, *Bubl and Butts,* 839
Threonine, tryptophan-deficient diets, effect, *Hankes, Henderson, and Elvehjem,* 1027
Guanidoacetic acid: Creatine formation *in vitro*, effect, *Binkley and Watson,* 971

H

Harden-Young: Yeast alcoholic fermentation, *Meyerhof,* 575
Heart: *See also* Muscle
Hemoglobin: Avian, determination, *Rostorfer,* 901
Hexokinase: Blood cell, red, hormones, effect, *Christensen, Plimpton, and Ball,* 791
2,4-Dinitrophenol effect, *Pierce and Field,* 895
Histamine: Acetyl-, urine, histamine administration effect, *Tabor and Mosettig,* 703
Urine acetylhistamine, administration effect, *Tabor and Mosettig,* 703
Histidine: Synthesis, mechanism, lactic acid bacteria, *Broquist and Snell,* 59
Hormone (s): Blood cell, red, hexokinase effect, *Christensen, Plimpton, and Ball,* 791
Hyaluronidase: Testis, preparation, *Freeman, Anderson, Oberg, and Dorfman,* 655
Hydrogen: Activation, *Clostridium kluyveri* enzyme preparations, *Stadtman and Barker,* 1117
Hydrogen peroxide: Alkyl, catalase, reaction, *Chance,* 865
Catalase, reaction, *Chance,* 947
Ethyl, catalase compounds, *Chance,* 865, 947
Methyl, catalase compounds, *Chance,* 865, 947
Hydroxylamine: Acetylcholine with, reaction, analytical application, *Hestrin,* 249
Carboxylic acid derivatives with, reaction, analytical application, *Hestrin,* 249
Hyperglycemia: -Glycogenolytic factor, gastric mucosa, purification, *Sutherland, Cori, Haynes, and Olsen,* 825
— —, insulin, purification, *Sutherland, Cori, Haynes, and Olsen,* 825

I

Insulin: Hyperglycemic-glycogenolytic factor, purification, *Sutherland, Cori, Haynes, and Olsen,* 825
Inulin: Determination, diphenylamine use, *Little,* 747
Ion(s): Liver glycogen and carbohydrate synthesis from pyruvate, effect, *Buchanan, Hastings, and Nesbett,* 447
— — synthesis from glucose, effect, *Buchanan, Hastings, and Nesbett,* 435
Isocitrate: *d-*, tobacco leaf culture, effect, *Vickery and Abrahams,* 37
Isoleucine: Foods, determination, microbiological, *Horn, Jones, and Blum,* 695
Protein, determination, microbiological, *Horn, Jones, and Blum,* 695
Isopyrooxodelphonine: Desmethylanhydro derivatives, oxidation, *Jacobs and Sato,* 479
Oxidation, *Jacobs and Sato,* 479

K

Ketobutyric acid: α-, cystathionine cleavage, enzymatic, *Carroll, Stacy, and du Vigneaud,* 375

L

Lactate: Pyruvate-, blood, oxythiamine effect, *Frohman and Day*, 93
Lactic acid: Bacteria, histidine synthesis, mechanism, *Broquist and Snell*, 59
Lactobacillus lactis: Determination, microbiological, vitamin B_{12} use, *Caswell, Koditschek, and Hendlin*, 125
Lamb: Amino acids, *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Laurin: Tri-, (—$C^{14}OO$—), emulsified, metabolism, *Geyer, Matthews, and Stare*, 1037
Lecithin: Blood plasma, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Liver, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Leucemia: Carbamates, chemotherapy, *Mitchell, Hutchinson, Skipper, and Bryan*, 675
Leucine: Aminopeptidase, specificity, *Smith and Polglase*, 1209
Iso-, foods, determination, microbiological, *Horn, Jones, and Blum*, 695
—, protein, determination, microbiological, *Horn, Jones, and Blum*, 695
Radioactive, acetoacetate conversion to, *Coon and Gurin*, 1159
Leucocyte(s): *See* Blood cell, white
Lipide(s): Phospho-. *See* Phospholipides
Lipoprotein: Yeast, *Nyman and Chargaff*, 741
Liver: Cephalin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Citrulline synthesis from ornithine, biotin deficiency, effect, *MacLeod, Grisolia, Cohen, and Lardy*, 1003
4-Dimethylaminoazobenzene cleavage, reductive, triphosphopyridine nucleotide relation, *Mueller and Miller*, 1125
Fetus, nucleic acid, *Geschwind and Li*, 467
Glycogen and carbohydrate synthesis from pyruvate, ion effect, *Buchanan, Hastings, and Nesbett*, 447
Glycogen, synthesis from glucose, ion effect, *Buchanan, Hastings, and Nesbett*, 435
Homogenates, glycolysis, *Stoesz and LePage*, 587
Lecithin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Phospholipides, formation, diethanolamine effect, *Artom, Cornatzer, and Crowder*, 495
Phosphorus, *Wildman, Campbell, and Bonner*, 273
Protein, glycine and serine, C^{14}-labeled, labeled glycine administration, effect, *Goldsworthy, Winnick, and Greenberg*, 341
Sphingomyelin, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Lumbricus terrestris: *See* Earthworm

M

Magnesium: Food, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Stool, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Urine, determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Malic acid: Determination, fluorometric, *Hummel*, 1225
Malt: α-Amylase, starches and derivatives, adsorbents, *Schwimmer and Balls*, 883
Mannose: 1-C^{14}-D-, preparation, *Sowden*, 55
Melanin: Chemistry, *Mason and Wright*, 235
Mercury: Compounds, succinic dehydrogenase and succinoxidase systems, effect, *Kreke, Kroger, and Cook*, 565
Methane: C^{14}-Nitro-, D-arabinose with, condensation, *Sowden*, 55

Methanol: Acetyl-L-tyrosinamide hydrolysis by chymotrypsin, effect, *Kaufman and Neurath*, 181
Methionine: Cystine, conversion from, cystinuria, *Reed, Cavallini, Plum, Rachele, and du Vigneaud*, 783
Methyl group, oxidation and distribution, *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud*, 99
Peptides, synthesis and enzymatic cleavage, *Dekker, Taylor, and Fruton*, 155
Methyl group(s): Butter yellow, metabolism, *Boissonnas, Turner, and du Vigneaud*, 1053
Methionine, oxidation and distribution, *Mackenzie, Chandler, Keller, Rachele, Cross, and du Vigneaud*, 99
Methyl phosphate: Creatine formation, *in vitro*, effect, *Binkley and Watson*, 971
Methylthiouracil: Glucose tolerance, scurvy, effect, *Banerjee and Ghosh*, 189
Molybdenum: Metabolism, copper and phosphorus relation, *Comar, Singer, and Davis*, 913
Mosaic: Virus, tobacco, protein, leaf protein relation, *Wildman, Cheo, and Bonner*, 985
Muscle: Glycerophosphate dehydrogenase, crystalline, *Baranowski*, 535
Heart, succinoxidase system, diphtherial, and, comparison, *Pappenheimer and Hendee*, 597
Mutase: Phosphogluco-, metal-binding agents, effect, *Sutherland*, 1279
—, reaction, mechanism, *Sutherland, Cohn, Posternak, and Cori*, 1285
Myogen: A, aldolase, *Baranowski and Niederland*, 543

N

Naphthindan-2,3,4-trione hydrate: *peri*-, and carbon dioxide, α-amino acid determination, use, *Moubasher and Sina*, 681
Neoplasm: Urethane catabolism, *Mitchell, Hutchison, Skipper, and Bryan*, 675
Nitrofuran(s): Metabolism, *Paul, Austin, Paul, and Ells*, 345
Urine end-products, ultraviolet absorption, administration effect, *Paul, Austin, Paul, and Ells*, 345
Nitrogen: Metabolism, earthworm, *Cohen and Lewis*, 79
Storage, mechanism, *Bartlett, Gaebler, and Harmon*, 1021
Nitromethane: C^{14}-, D-arabinose with, condensation, *Sowden*, 55
Nuclease: Desoxypentose, yeast, *Zamenhof and Chargaff*, 727
Nucleic acid: Liver, fetal, *Geschwind and Li*, 467
Ribo-, *Kerr and Seraidarian*, 1203
—, pancreas, preparation, *Kerr and Seraidarian*, 1203
Yeast, isotopically labeled, *Di Carlo, Schultz, Roll, and Brown*, 329
—, metabolism, *Roll, Brown, Di Carlo, and Schultz*, 333
Nucleotide(s): Riboflavin, determination, fluorometric, *Bessey, Lowry, and Love*, 755
—, preparation, *LePage and Mueller*, 975
—, tissues, *Bessey, Lowry, and Love*, 755
Triphosphopyridine, 4-dimethylaminoazobenzene cleavage, reductive, liver, relation, *Mueller and Miller*, 1125

O

Oat: Coleoptiles, phosphorus, *Wildman, Campbell, and Bonner*, 273
Octanoic acid: (—C^{14}OO—), metabolism, *Geyer, Matthews, and Stare*, 1037
Organic acid(s): Tobacco leaves, metabolism, *Vickery and Abrahams*, 37
Ornithine: Liver, citrulline synthesis from, biotin deficiency, effect, *MacLeod, Grisolia, Cohen, and Lardy*, 1003

Oxalacetate: Decarboxylase, *Azotobacter vinelandii, Plaut and Lardy,* 13
Oxidase: Pterine, *Lowry, Bessey, and Crawford,* 399
Succin-, diphtheria, heart muscle and, comparison, *Pappenheimer and Hendee,* 597
—, mercury and thiol compounds, effect, *Kreke, Kroger, and Cook,* 565
—, *Salmonella aertrycke, Kun and Abood,* 813
Succinate, phosphate and phosphorus compounds, relation, *Ball and Cooper,* 113
Oxybiotin: Derivatives, biotin and oxybiotin, effect, *Axelrod and Hofmann,* 525
Oxybiotin derivatives, effect, *Axelrod and Hofmann,* 525
Oxygen: Blood, determination, spectrophotometric, *Hickam and Frayser,* 457
Carbon dioxide, respiratory, source, heavy oxygen in study, *Lifson, Gordon, Visscher, and Nier,* 803
Molecular, fate, heavy oxygen in study, *Lifson, Gordon, Visscher, and Nier,* 803
Oxythiamine: Blood pyruvate-lactate, effect, *Frohman and Day,* 93
Thiamine excretion, effect, *Frohman and Day,* 93
Oxytocic material: Preparation, counter-current distribution use, *Livermore and du Vigneaud,* 365

P

Pancreas: Carboxypeptidase, sedimentation rate and molecular weight, *Smith, Brown, and Hanson,* 33
Ribonucleic acid preparation, *Kerr and Seraidarian,* 1203
Pancreatin: Cholesterol esterase, preparation and properties, *Yamamoto, Goldstein, and Treadwell,* 615
Peptidase: Amino-, leucine, specificity, *Smith and Polglase,* 1209
Blood serum, adrenal cortex effect, *Schwartz and Engel,* 1047
Peptidase—*continued:*
Carboxy-, pancreas, sedimentation rate and molecular weight, *Smith, Brown, and Hanson,* 33
Dehydro-, purification and properties, *Shack,* 411
Peptide(s): *Escherichia coli* mutant strains, utilization, *Simmonds and Fruton,* 635
Methionine, synthesis and enzymatic cleavage, *Dekker, Taylor, and Fruton,* 155
Tri-, enzyme hydrolysis, *Fodor, Price, and Greenstein,* 193
Perborate: Catalase determination, use, *Feinstein,* 1197
Phaseolus vulgaris: *See* Bean
Phenylalanine: Metabolism, radioactive carbon in study, *Schepartz and Gurin,* 663
Racemic, resolution, *Gilbert, Price, and Greenstein,* 473
β-3-Thienylalanine relation, *Garst, Campaigne, and Day,* 1013
Phenylpyruvic acid: Growth, effect, *Bubl and Butts,* 839
Phosphatase: Alkaline, beryllium effect, *Klemperer, Miller, and Hill,* 281
Grier, Hood, and Hoagland, 289
Phosphate: Succinate oxidase, relation, *Ball and Cooper,* 113
Phosphoglucomutase: Metal-binding agents, effect, *Sutherland,* 1279
Reaction, mechanism, *Sutherland, Cohn, Posternak, and Cori,* 1285
Phospholipide(s): Liver, formation, diethanolamine effect, *Artom, Cornatzer, and Crowder,* 495
Phosphorus: Liver, *Wildman, Campbell, and Bonner,* 273
Molybdenum metabolism, relation, *Comar, Singer, and Davis,* 913
Oat coleoptiles, *Wildman, Campbell, and Bonner,* 273
Succinate oxidase, relation, *Ball and Cooper,* 113
Tobacco leaves, *Wildman, Campbell, and Bonner,* 273
Phosphorylation: Aerobic, mechanism, *Hummel and Lindberg,* 1

Phosphoryl-enolpyruvic acid: Synthesis, *Baer and Fischer*, 145
Photolysis: Pteroylglutamic acid transformation, *Lowry, Bessey, and Crawford*, 389
Pituitary: Anterior, growth hormone, blood plasma glutamine and amino acids, effect, *Bartlett, Gaebler, and Harmon*, 1021
—, — —, urine ammonia, effect, *Bartlett, Gaebler, and Harmon*, 1021
Pork: Amino acids, *Schweigert, Guthneck, Kraybill, and Greenwood*, 1077
Protein, availability, heat effect, *Beuk, Chornock, and Rice*, 1243
Protein(s): Bean, crystalline, *Bourdillon*, 553
Blood plasma, biophysics, *Deutsch and McShan*, 219
— serum, electrophoresis, *Deutsch and McShan*, 219
— —, origin, *Roberts and White*, 505
Factor, animal, nature, *Stokstad, Jukes, Pierce, Page, and Franklin*, 647
Isoleucine determination, microbiological, *Horn, Jones, and Blum*, 695
Leaf, green, *Wildman, Cheo, and Bonner*, 985
Lipo-, yeast, *Nyman and Chargaff*, 741
Liver, glycine and serine, C^{14}-labeled, labeled glycine administration, effect, *Goldsworthy, Winnick, and Greenberg*, 341
Pork, availability, heat effect, *Beuk, Chornock, and Rice*, 1243
Synthesis, ammonia utilization rate, *Sprinson and Rittenberg*, 707
Tissue, dietary amino acids, interaction, *Sprinson and Rittenberg*, 715
Tobacco mosaic virus, leaf protein relation, *Wildman, Cheo, and Bonner*, 985
Proteolysis: Enzyme, methionine peptides, cleavage, *Dekker, Taylor, and Fruton*, 155
Pterine: Oxidase, *Lowry, Bessey, and Crawford*, 399
Pteroylglutamic acid: Transformation, photolytic and enzymatic, *Lowry, Bessey, and Crawford*, 389
See also Folic acid
Pyruvate: -Lactate, blood, oxythiamine effect, *Frohman and Day*, 93
Liver glycogen and carbohydrate synthesis from, ion effect, *Buchanan, Hastings, and Nesbett*, 447
Pyruvic acid: Phenyl-, growth, effect, *Bubl and Butts*, 839
Phosphoryl-enol-, synthesis, *Baer and Fischer*, 145

R

Riboflavin: Nucleotides, determination, fluorometric, *Bessey, Lowry, and Love*, 755
—, tissues, *Bessey, Lowry, and Love*, 755
Ribonucleic acid: *Kerr and Seraidarian*, 1203
Pancreas, preparation, *Kerr and Seraidarian*, 1203

S

Salmonella aertrycke: Succinoxidase, *Kun and Abood*, 813
Scurvy: Glucose tolerance, thyroid and methylthiouracil effect, *Banerjee and Ghosh*, 189
Serine: Glycine conversion to, biological, *Siekevitz and Greenberg*, 845
Liver protein, C^{14}-labeled, labeled glycine administration, effect, *Goldsworthy, Winnick, and Greenberg*, 341
Serotonin: *Rapport*, 961
Sodium bicarbonate: Labeled, C^{14} retention from, *Skipper, White, and Bryan*, 1187
Sphingomyelin: Blood plasma, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Liver, diethylstilbestrol effect, *Ranney, Entenman, and Chaikoff*, 307
Starch(es): Derivatives, malt α-amylase, adsorbents, *Schwimmer and Balls*, 883

Starch(es)—*continued:*
Malt α-amylase, adsorbents, *Schwimmer and Balls*, 883
Stilbestrol: Diethyl-. *See* Diethylstilbestrol,
Stomach: Mucosa, hyperglycemic-glycogenolytic factor, purification, *Sutherland, Cori, Haynes, and Olsen*, 825
Stool: Calcium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Magnesium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Succinate: Oxidase, phosphate and phosphorus compounds, relation, *Ball and Cooper*, 113
Succinic dehydrogenase: Mercury and thiol compounds, effect, *Kreke, Kroger, and Cook*, 565
Succinoxidase: Diphtheria, heart muscle and, comparison, *Pappenheimer and Hendee*, 597
Salmonella aertrycke, Kun and Abood, 813
Systems, mercury and thiol compounds, effect, *Kreke, Kroger, and Cook*, 565
Sucrose: Carbon^{14}-labeled preparation from glucose or fructose, *Wolochow, Putman, Doudoroff, Hassid, and Barker*, 1237

T

Testis: Hyaluronidase preparation, *Freeman, Anderson, Oberg, and Dorfman*, 655
Thiamine: Excretion, oxythiamine effect, *Frohman and Day*, 93
Oxy-, blood pyruvate-lactate, effect, *Frohman and Day*, 93
—, thiamine excretion, effect, *Frohman and Day*, 93
Thiamine pyrophosphate: Thiamine triphosphoric acid relation, *Velluz, Amiard, and Bartos*, 1137
Thiamine triphosphoric acid: Cocarboxylase relation, *Velluz, Amiard, and Bartos*, 1137
Thienylalanine: β-3-, phenylalanine relation, *Garst, Campaigne, and Day*, 1013
—, synthesis, *Garst, Campaigne, and Day*, 1013
Thiol: Compounds, succinic dehydrogenase and succinoxidase systems, effect, *Kreke, Kroger, and Cook*, 565
Thiophene(s): 3-Substituted, *Garst, Campaigne, and Day*, 1013
Thiouracil: Methyl-, glucose tolerance, scurvy, effect, *Banerjee and Ghosh*, 189
Threonine: Growth, tryptophan-deficient diets, effect, *Hankes, Henderson, and Elvehjem*, 1027
Thyroid: Glucose tolerance, scurvy, effect, *Banerjee and Ghosh*, 189
Tobacco: Leaves, *d*-isocitrate and acetate solutions, culture effect, *Vickery and Abrahams*, 37
—, organic acids, metabolism, *Vickery and Abrahams*, 37
—, phosphorus, *Wildman, Campbell, and Bonner*, 273
Mosaic virus protein, leaf protein relation, *Wildman, Cheo, and Bonner*, 985
Tocopherol(s): α-, and esters, vitamin E, *Harris and Ludwig*, 611
Blood serum, determination, micro-, *Quaife, Scrimshaw, and Lowry*, 1229
Tissue, *Quaife and Dju*, 263
Toxin: Diphtheria, *Pappenheimer and Hendee*, 597
Trilaurin: (—C^{14}OO—), emulsified, metabolism, *Geyer, Matthews, and Stare*, 1037
Tripeptide(s): Enzyme hydrolysis, *Fodor, Price, and Greenstein*, 193
Triphosphopyridine: Nucleotide, 4-dimethylaminoazobenzene cleavage, reductive, liver, relation, *Mueller and Miller*, 1125
—, preparation, *LePage and Mueller*, 975
Trypsin: Chymo-, acetyl-L-tyrosinamide hydrolysis, methanol effect, *Kaufman and Neurath*, 181

Trypsin—*continued:*
Chymo-, B, electrophoresis and solubility, *Kubacki, Brown, and Laskowski*, 73
δ-Chymo-, substrate specificity and sedimentation rate, *Schwert and Kaufman*, 517
Trypsinogen: Chymo-, B, electrophoresis and solubility, *Kubacki, Brown, and Laskowski*, 73
Tryptophan: -Deficient diets, cystine and threonine, growth, effect, *Hankes, Henderson, and Elvehjem*, 1027
Determination, fluorometric, *Gordon and Mitchell*, 1065
Racemic, resolution, *Gilbert, Price, and Greenstein*, 473
Tumor: *See also* Neoplasm
Tyrosinamide: Acetyl-L-, chymotrypsin, hydrolysis, effect, *Kaufman and Neurath*, 181
Tyrosinase: Dihydroxyphenylalanine oxidation, effect, *Mason and Wright*, 235
Tyrosine: Racemic, resolution, *Gilbert, Price, and Greenstein*, 473

U

Urethane: Catabolism, neoplasms, *Mitchell, Hutchison, Skipper, and Bryan*, 675
Urine: Acetylhistamine, histamine administration effect, *Tabor and Mosettig*, 703
α-Amino acids, determination, *perinaphthindan-2,3,4-trione hydrate-carbon dioxide use, Moubasher and Sina*, 681
Ammonia, anterior pituitary growth hormone, effect, *Bartlett, Gaebler, and Harmon*, 1021
Urine—*continued:*
Calcium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Magnesium determination, micro-, colorimetric, *Michaels, Anderson, Margen, and Kinsell*, 175
Nitrofuran end-products, ultraviolet absorption, administration effect, *Paul, Austin, Paul, and Ells*, 345

V

Vasoconstrictor: Blood serum, *Rapport*, 961
— —, chemical constitution, *Rapport*, 961
— —, creatinine, *Rapport*, 961
Virus: Tobacco mosaic, protein, leaf protein relation, *Wildman, Cheo, and Bonner*, 985
Vitamin(s): B_{12}, enzyme activity, effect, *Williams, Nichol, and Elvehjem*, 689
—, *Lactobacillus lactis* determination, microbiological, use, *Caswell, Koditschek, and Hendlin*, 125
E, tissue, determination, chemical, *Quaife and Dju*, 263
—, α-tocopherol and esters, *Harris and Ludwig*, 611

Y

Yeast: Alcohol fermentation, Harden-Young effect, *Meyerhof*, 575
Desoxypentose nuclease, *Zamenhof and Chargaff*, 727
Lipoprotein, *Nyman and Chargaff*, 741
Nucleic acid, isotopically labeled, *Di Carlo, Schultz, Roll, and Brown*, 329
— —, metabolism, *Roll, Brown, Di Carlo, and Schultz*, 333